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ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
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LEONARD K. PETERS
SECRETARY

FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE COMMONWEALTH

KPDES No.: KY0093874 Permit Writer: Ronnie Thompson Date: March 19, 2009
AI No.: 1509

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Pilgrim's Pride
2653 State Route 1241
Hickory, Kentucky 42051

b. Facility Location

Pilgrim's Pride
2653 State Route 1241
Hickory, Graves County, Kentucky

c. Description of Applicant's Operation

Pilgrim's Pride is a poultry slaughterhouse. Live chickens are slaughtered to produce ready to cook meat in the form of cut, deboned and whole birds (SIC Code 2015). Waste products are sent to a rendering plant or ground and shipped as a pet food ingredient.

d. Production Capacity of Facility

Pilgrim's Pride produces 1.6 million pounds of finished product per day.

e. Description of Existing Pollution Abatement Facilities

Process wastewater is discharged after treatment in an activated sludge aerobic system with chlorine disinfection. A small amount of storm water runoff (500,000 gpy) is combined with the process wastewater prior to treatment. Sludge from the treatment system is processed by belt filtration.

f. Permitting Action

Reissuance of a minor KPDES permit for an existing source poultry slaughterhouse.

2. **RECEIVING WATERS**

a. Stream Name/Location

Cooley Creek at latitude 36-49-36 and longitude 88-39-07

b. Stream Segment Use Classifications

Cooley Creek is classified as Warmwater Aquatic Habitat, Primary/Secondary Contact Recreation and Domestic Water Supply.

c. Stream Segment Categorization

Pursuant to 401 KAR 10:030, Section 1 Cooley Creek is categorized as Impaired Waters.

Cooley Creek stream segment from 0.7 to 2.3 is listed on the 2008 Draft Integrated Report to Congress on the Condition of Water Resources in Kentucky 303(d) List of Surface Waters as impaired. The impaired use is for Primary Contact Recreation due to the pollutant of Fecal Coliform.

The Division has developed a Category 4A Total Maximum Daily Load (TMDL) for Cooley Creek, which was approved by the United States Environmental Protection Agency Region IV, meeting full compliance with Section 303(d) of the Clean Water Act, requiring TMDLs be established at levels necessary to implement the applicable water quality standards. A properly operating facility in compliance with their conditions and limits should not contribute to this impairment.

d. Stream Low Flow Condition

At the point of discharge, the 7Q10 and the Harmonic Mean for Cooley Creek are both 0 cfs.

At the city of Wickliffe, Kentucky intake, the nearest downstream public water supply, the 7Q10 and the Harmonic Mean for the Mississippi River are 110,820 cfs and 300,00 cfs, respectively.

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Serial Number - Outfall 001 - Process wastewater and storm water runoff.

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Flow (mgd)	1.781	3.193	Report	Report	401 KAR 5:065, Section 2(8)
CBOD ₅ (mg/l)	3	23	10	15	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
Total Suspended Solids (mg/l)	10	39	19	38	401 KAR 5:065, Section 5
Fecal Coliform (N/100 ml)	16	600	N/A	400	401 KAR 5:065, Section 5
<i>Escherichia Coli</i> (N/100 ml)	NR	NR	130	240	401 KAR 10:031, Section 7 401 KAR 5:045, Section 4 401 KAR 5:080, Section 1(2)(c)2
Ammonia Nitrogen (as mg/l N)					401 KAR 10:031, Section 4
May 1 - October 31	BDL	4	3.0	4.5	401 KAR 5:045, Sections 3 and 5
November 1 - April 30	4	25	4.0	8.0	401 KAR 5:065, Section 5
Oil & Grease (mg/l)	BDL	8	6.4	12.8	401 KAR 5:065, Section 5
Dissolved Oxygen (mg/l)	6.8 (min)		Not less than 7.0		401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
Chloride (mg/l)	155	287	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Phosphorus (mg/l)	0.31	1.68	0.63	Report	401 KAR 5:065, Section 2(12)(b)
Color (ADMI Units)	10	26	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Copper (mg/l)	0.008	0.050	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Lead (mg/l)	BDL	0.011	Removing from permit		401 KAR 5:080, Section 1(2)(c)2

3. REPORTED DISCHARGE AND PROPOSED LIMITS - continued

Serial Number - Outfall 001 - Process wastewater and storm water runoff.

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Total Residual Chlorine (mg/l)	NR	NR	0.011	0.019	401 KAR 10:031, Section 4(k)
pH (standard units)	6.0 (min)	7.1 (max)	6.0 (min)	9.0 (max)	401 KAR 10:031, Section 4 401 KAR 5:045, Section 4

The data in the Reported Discharge columns for Flow, Carbonaceous Biochemical Oxygen Demand (5-day), Total Suspended Solids, Fecal Coliform, Ammonia Nitrogen, Oil & Grease, Chloride, Phosphorus, Color, Dissolved Oxygen, Total Recoverable Copper, Total Recoverable Lead and pH was determined from an analysis of the Discharge Monitoring Reports (DMRs) for the previous permit.

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day).

The abbreviation NR means Not Reported on the Discharge Monitoring Reports (DMRs).

The abbreviation N/A means Not Applicable.

The abbreviation BDL means Below Detectable Limit.

The effluent limitations for CBOD₅ and Total Suspended Solids are Monthly (30 day) and Weekly (7 day) Averages.

The effluent limitations for *Escherichia Coli* are thirty (30) day and seven (7) day Geometric Means.

4. **METHODOLOGY USED IN DETERMINING LIMITATIONS**

a. Serial Number

Outfall 001 - Process wastewater at the rate of 3.0 mgd and storm water runoff. Process wastewater is generated from primary (1.68 mgd), secondary (0.72 mgd) and hygienic (0.6 mgd) operations.

b. Effluent Characteristics

Flow, Carbonaceous Biochemical Oxygen Demand (5-day), Total Suspended Solids, Fecal Coliform Bacteria, *Escherichia Coli*, Ammonia Nitrogen, Oil & Grease, Chloride, Total Phosphorus, Color, Dissolved Oxygen, Total Recoverable Copper, Total Recoverable Lead, Total Residual Chlorine, Total Nitrogen and pH.

c. Pertinent Factors

Pilgrim's Pride is an existing source subject to the requirements of Subpart A (Simple Slaughterhouse Subcategory) of 40 CFR Part 432 - Meat and Poultry Products Point Source Category. Specifically, the effluent limitations attainable by the application of "Best Available Technology Economically Achievable" (BAT) of 40 CFR Part 432.13 and "Best Control Technology for Conventional Pollutants" (BCT) of 40 CFR Part 432.17 apply.

A summarization of the effluent requirements and calculations can be found in Attachment A - Effluent Guidelines for Pilgrim's Pride.

A comparison of the effluent guidelines and water quality limits can be found in Attachment B - Limit Comparison for Pilgrim's Pride.

A summarization of other water quality standards, assumptions, and calculations can be found in Attachment C - SSTWAM2004 for Pilgrim's Pride.

d. Monitoring Requirements

Flow shall be monitored instantaneously once per week.

Carbonaceous Biochemical Oxygen Demand (5-day), Total Suspended Solids, Ammonia Nitrogen and Total Phosphorus shall be monitored once per week by 24-hour composite sample.

Fecal Coliform, *Escherichia Coli*, Oil & Grease, Dissolved Oxygen, Total Residual Chlorine and pH shall be monitored once per week by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8).

4. METHODOLOGY USED IN DETERMINING LIMITATIONS - continued

e. Justification of Limits - continued

Total Suspended Solids, Fecal Coliform Bacteria and Oil & Grease

The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Section 5. The limits are representative of the "Best Control Technology for Conventional Pollutants" (BCT) requirements for process wastewater from a simple slaughterhouse (40 CFR Part 432.17).

Carbonaceous Biochemical Oxygen Demand (5-day) and Dissolved Oxygen

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 401 KAR 5:045, Sections 3 and 5. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 require biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

Escherichia Coli

The limits for *Escherichia Coli* are consistent with the requirements of 401 KAR 10:031, Section 7, 401 KAR 5:045, Section 4 and 401 KAR 5:080, Section 1(2)(c)2. Although Fecal Coliform Bacteria has been used as an indicator of fecal contamination, it does contain other species that are not necessarily fecal in origin. EPA recommends *Escherichia Coli*, which is specific to fecal material from warm-blooded animals, as the best indicator of health risks from contact with recreational waters. Therefore, it is the "Best Professional Judgment" (BPJ) of the Division of Water that *Escherichia Coli* be regulated on this permit.

Ammonia Nitrogen

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 401 KAR 5:045, Sections 3 and 5. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 require biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities. The limits for this parameter are also consistent with the requirements of 401 KAR 5:065, Section 5. The limits are representative of the "Best Available Technology Economically Achievable" (BAT) requirements for process wastewater from a simple slaughterhouse (40 CFR Part 432.13).

Chloride

The removal of this parameter from the permit is consistent with 401 KAR 5:080, Section 1(2)(c)2. The previous permit contained effluent limitations. Utilizing data from the Discharge Monitoring Reports (DMRs), the Division of Water calculated expected effluent limitations and performed a reasonable potential analysis. The results of this analysis can be found in Attachment C. The reasonable potential analysis performed recommended that no monitoring or limits be applied to this parameter. Therefore, it is the "Best Professional Judgment" (BPJ) of the Division of Water that this parameter be removed from the permit.

4. **METHODOLOGY USED IN DETERMINING LIMITATIONS - continued**

e. Justification of Limits - continued

Total Phosphorus

The limits for this parameter are consistent with the "no less stringent" provisions of 401 KAR 5:065, Section 2(12)(b).

Color

The removal of this parameter from the permit is consistent with 401 KAR 5:080, Section 1(2)(c)2. A review of the DMR data for the previous permit indicated that reasonable potential did not exist for this parameter to be limited or monitored in the permit. Therefore, it is the "Best Professional Judgment" (BPJ) of the Division of Water that this parameter be removed from the permit.

Total Recoverable Copper and Total Recoverable Lead

The removal of these parameters from the permit is consistent with 401 KAR 5:080, Section 1(2)(c)2. The previous permit contained a monitoring requirement but no effluent limitations. Utilizing data from the Discharge Monitoring Reports (DMRs), the Division of Water calculated expected effluent limitations and performed a reasonable potential analysis. The results of this analysis can be found in Attachment C. The reasonable potential analysis performed recommended that no monitoring or limits be applied to these parameters. Therefore, it is the "Best Professional Judgment" (BPJ) of the Division of Water that these parameters be removed from the permit.

Total Residual Chlorine

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4.

pH

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 401 KAR 5:045, Section 4. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of this parameter for biochemically degradable wastewaters.

5. **ANTIDEGRADATION**

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. Since this permit action involves reissuance of an existing permit, and does not propose an expanded discharge, a review under 401 KAR 10:030 Section 1 is not applicable.

6. **PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS**

Permittee shall comply with the effluent limitations by the effective date of the permit.

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE**

Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224.

Outfall Signage

As a member of ORSANCO (Ohio River Valley Sanitation Commission) the Commonwealth of Kentucky through the Division of Water implements a requirement that the permittee post a permanent marker at each discharge point to the Ohio River. It is the Best Professional Judgment of the Division of Water, 401 KAR 5:080, Section 1(2)(c)2, that all permittees post a marker at all discharge locations and/or monitoring points. The ORSANCO requirements for the marker specify it to be at least 2 feet by 2 feet in size and a minimum of 3 feet above ground level with the Permittee Name and KPDES permit and outfall numbers in 2 inch letters. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and is to be posted as near as possible to the actual sampling location.

8. **PERMIT DURATION**

Five (5) years. This facility is in the Four Rivers, Upper and Lower Cumberland Basin Management Unit as per the Kentucky Watershed Management Framework.

9. **PERMIT INFORMATION**

The application, draft permit fact sheet, public notice, comments received and additional information is available by writing the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

10. **REFERENCES AND CITED DOCUMENTS**

All material and documents referenced or cited in this fact sheet are a part of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

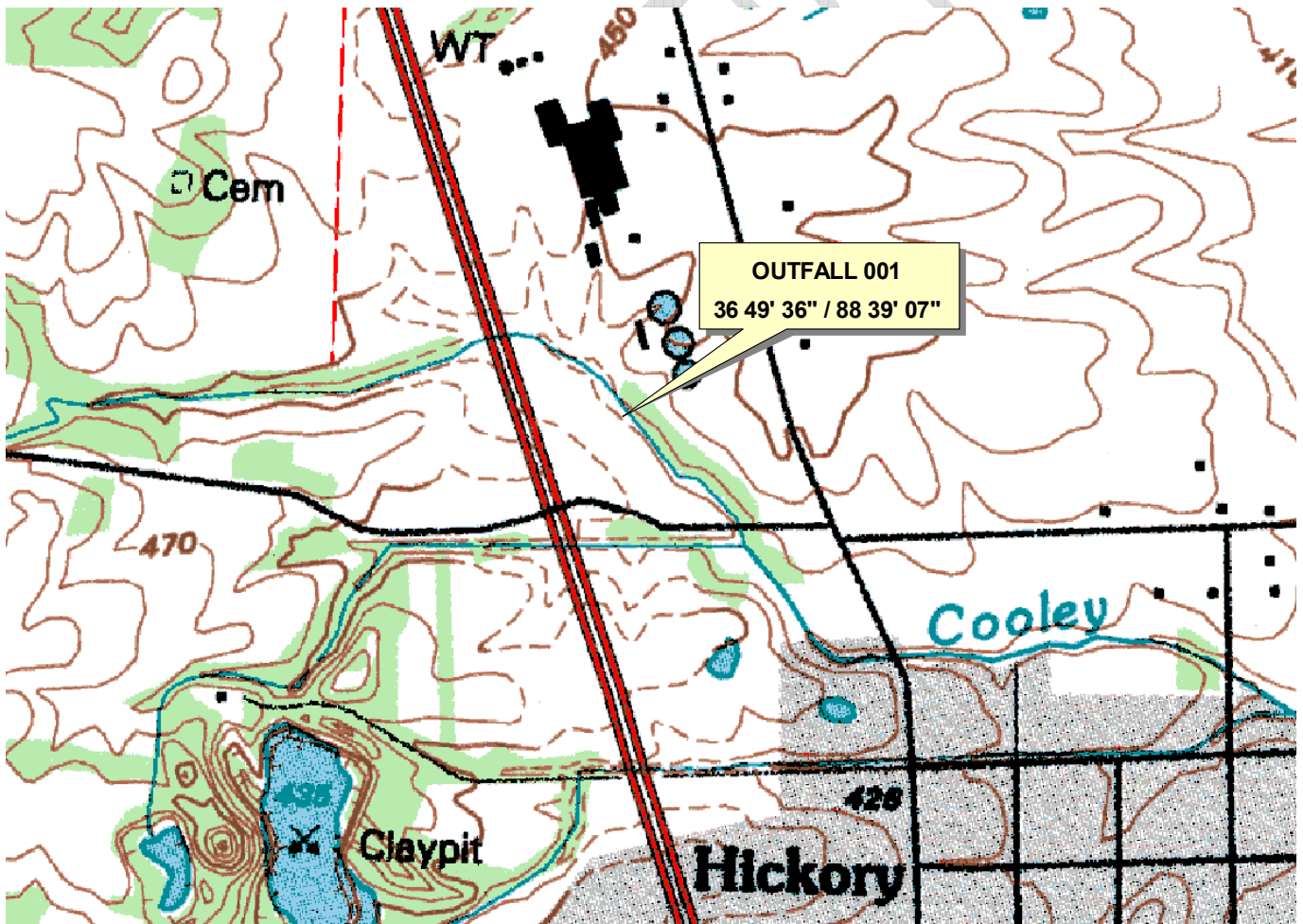
11. **CONTACT**

For further information, contact the individual identified on the Public Notice or the Permit Writer - Ronnie Thompson at (502) 564-8158, extension 4896 or e-mail Ronnie.Thompson@ky.gov.

12. **PUBLIC NOTICE INFORMATION**

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by 401 KAR 5:075, Section 4(2)(e).

Pilgrim's Pride



KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0093874
AI No.: 1509

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Pilgrim's Pride
2653 State Route 1241
Hickory, Kentucky 42051

is authorized to discharge from a facility located at

Pilgrim's Pride
2653 State Route 1241
Hickory, Graves County, Kentucky

to receiving waters named

Cooley Creek at latitude 36-49-36 and longitude 88-39-07

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, III and IV hereof. The permit consists of this cover sheet, PART I 2 pages, PART II 1 page, PART III 1 page and PART IV 3 pages.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Sandra L. Gruzesky, Director
Division of Water

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: 001 - Process wastewater and storm water runoff.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTICS</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	(lbs/day) Monthly Avg.	Daily Max.	Other Units (Specify) Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (mgd)	Report	Report	N/A	N/A	1/Week	Instantaneous
CBOD ₅	250	375	10 mg/l	15 mg/l	1/Week	24-Hr Composite
Total Suspended Solids	480	960	19 mg/l	38 mg/l	1/Week	24-Hr Composite
Fecal Coliform (N/100 ml)	N/A	N/A	N/A	400	1/Week	Grab
<i>Escherichia Coli</i> (N/100 ml)	N/A	N/A	130	240	1/Week	Grab
Ammonia, as N						
May 1 - October 31	75	112	3.0 mg/l	4.5 mg/l	1/Week	24-Hr Composite
November 1 - April 30	100	200	4.0 mg/l	8.0 mg/l	1/Week	24-Hr Composite
Oil & Grease	160	320	6.4	12.8	1/Week	Grab
Dissolved Oxygen (mg/l)	N/A	N/A	Not less than	7.0	1/Week	Grab
Total Phosphorus	15.8	Report	0.63 mg/l	Report	1/Week	24-Hr Composite
Total Residual Chlorine	N/A	N/A	0.011 mg/l	0.019 mg/l	1/Week	Grab

The pH of the effluent shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/Week by grab sample.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge or to mixing with the receiving waters or waste streams from other outfalls.

The abbreviation N/A means Not Applicable

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day)

Effluent limitations for CBOD₅ and Total Suspended Solids are Monthly (30 day) and Weekly (7 day) Averages.

The effluent limitations for *Escherichia Coli* are thirty (30) day and seven (7) day Geometric Means.

B. Schedule of Compliance

The permittee shall achieve compliance with all requirements on the effective date of this permit.

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STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

PART III

OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Paducah Regional Office
130 Eagle Nest Drive
Paducah, Kentucky 42003
ATTN: Supervisor

Energy and Environment Cabinet
Dept. for Environmental Protection
Division of Water/Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Outfall Signage

The permittee shall post a permanent marker at all discharge locations and/or monitoring points. The marker shall be at least 2 feet by 2 feet in size and a minimum of 3 feet above ground level with the Permittee Name and KPDES permit and outfall numbers in 2 inch letters. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and shall be posted as near as possible to the actual sampling location.

PART IV

BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals, the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.
 - (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in part b of this section.
- e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to NREPC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Paducah Regional Office
130 Eagle Nest Drive
Paducah, Kentucky 42003
ATTN: Supervisor

Energy and Environment Cabinet
Dept. for Environmental Protection
Division of Water/Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

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9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

Periodically Discharged Wastewaters Not Specifically Covered By Effluent Conditions

The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, water associated with demolition projects, etc.

EFFLUENT GUIDELINES

**40 CFR PART 432 - MEAT AND POULTRY PRODUCTS POINT SOURCE CATEGORY
 Subpart A - Simple Slaughterhouse Subcategory**

Subsection 432.13 - Best Available Technology Economically Achievable (BAT) for process wastewater

Effluent Characteristic	Maximum for Any 1 Day	Maximum for Monthly Averages
	milligrams per liter	
Ammonia (as N)	4.0	8.0
Total Nitrogen	194	134

Subsection 432.17 - Best Control Technology for Conventional Pollutants (BCT) for process wastewater

Effluent Characteristic	Maximum for Any 1 Day	Maximum for Monthly Averages
	lbs per thousand lbs LWK	
BOD 5	0.34	0.17
Fecal Coliform	(1)	(2)
Oil & Grease	0.16	0.08
Total Suspended Solids	0.48	0.24
(1) Maximum of 400 MPN or CFU per 100 ml at any time		
(2) No maximum monthly average limitation		

Limit Calculations - Process Wastewater

Multiplying by the production rate of 2 million pounds per day live weight killed (LWK) and dividing by 1,000 yields the daily maximum and monthly average limitations in pounds per day for those parameters expressed in terms of production rate.

Effluent Characteristic	Daily Maximum	Monthly Average
	lbs per day	
BOD 5	680	340
Oil & Grease	320	160
Total Suspended Solids	960	480

LIMIT COMPARISON

The final step in the limits determination is to compare the limitations generated by the effluent guidelines and those generated by the water quality standards for common parameters, choosing the more stringent.

Effluent Guidelines Generated Limits

Effluent Characteristic	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
	mg/l		lbs per day	
Ammonia (as N)	8.0	4.0	200*	100*
Total Nitrogen	194	134	4554*	3353*
BOD 5	27*	14*	680	340
Total Suspended Solids	38*	19*	960	480

Water Quality Generated Limits

Effluent Characteristic	Daily Maximum	Monthly Average	Daily Maximum*	Monthly Average*
	mg/l		lbs per day	
Ammonia, Summer	4.5	3	112	75
Ammonia, Winter	15	10	375	250
CBOD 5	15	10	375	250
Total Suspended Solids	45	30	1126	751

*Calculations based on 3.0 mgd of process wastewater flow and a conversion factor of 8.34. Storm water flow into the treatment plant is negligible.

Final Limits for Common Parameters

Effluent Characteristic	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
	mg/l		lbs per day	
Ammonia, Summer	4.5	3	112	75
Ammonia, Winter	8.0	4.0	200	100
CBOD 5	15	10	375	250
Total Suspended Solids	38	19	960	480

The limits for CBOD 5 are more stringent than the limits for BOD 5 based upon 30 mg/l BOD 5 being equal to 25 mg/l CBOD 5. Thus, it is not necessary to include BOD 5 in the permit.

The limits for Ammonia Nitrogen are more stringent than the limits for Total Nitrogen based upon a 1:3 ratio derived from permit application data. Thus, it is not necessary to include Total Nitrogen in the permit.

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Permit Writer	Thompson	
Date Entered	3/19/2009	
Facility Name	Pilgrim's Pride	
KPDES Number	KY0093874	
Outfall Number	001	
Case	Reissuance	
Status:		
Is this an existing facility – Enter "E"	E	
Is this an existing facility with an increase in pollutant load – Enter "I"		
Is this a new facility – Enter "N"		
Is this a regional facility with an approved up-to-date 201 plan – Enter "R"		
Has the permittee made a successful alternatives analysis/socioeconomic demonstration – Enter "A"		
Receiving Water Name	Cooley Creek	
Discharge Mile Point	1.3	
Public Water Supply Name	Wickliffe Municipal Water System	
Intake Water Name	Mississippi River	
Intake Mile Point	950.3	
Total Effluent Flow (Q_T)	3	MGD
Receiving Water 7Q10 (Q_{RW7Q10})	0	cfs
Receiving Water Harmonic Mean (Q_{RWHM})	0	cfs
Receiving Water pH	7.5	SU
Receiving Water Temperature	20.00	°C
Intake Water 7Q10 (Q_{IW7Q10})	110820	cfs
Intake Water Harmonic Mean (Q_{IWHM})	300000	cfs
Effluent Hardness	280	(as mg/l CaCO ₃)
Receiving Water Hardness	100	(as mg/l CaCO ₃)
Zone of Initial Dilution (ZID)	1	
Mixing Zone (MZ)	0	
Acute to Chronic Ratio (ACR)	0.1	
Impaired	Yes	
Permittee agrees to accept no mixing zone for bioaccumulative or persistent pollutants prior to 09/08/2014	No	

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Calculation Methodology

Definitions

Acute to Chronic Ratio
 Aquatic Life Acute Criteria
 Aquatic Life Chronic Criteria
 Human Health Criteria - Fish Only
 Human Health Criteria - Fish & Water
 End of Pipe Effluent Limit
 Instream Background Concentration
 Toxicity Units - Acute
 Effluent Hardness

ACR
 C_A
 C_C
 C_{HHFO}
 C_{HHFW}
 C_T
 C_U
 TU_a
 H_T

Total Effluent Flow
 Receiving Water 7Q10
 Receiving Water Harmonic Mean
 Intake Water 7Q10
 Intake Water Harmonic Mean
 Zone of Initial Dilution
 Mixing Zone
 Toxicity Units - Chronic
 Receiving Water Hardness

Q_T
 Q_{RW7Q10}
 Q_{RWHM}
 Q_{IW7Q10}
 Q_{IWHM}
 ZID
 MZ
 TU_c
 H_{RW}

Aquatic Life - Chemical Specific

Acute

NO ZID given $C_T = C_A$
 ZID given $C_T = (C_A - C_U) \times (ZID)$

Chronic Mixing Zone / Complete Mix

$$C_T = \{C_C[Q_T + (MZ)(Q_{RW7Q10})] - [C_U(MZ)(Q_{RW7Q10})]\} / Q_T$$

Human Health - Chemical Specific

Fish Only: Mixing Zone / Complete Mix

Carcinogen / Non-Carcinogen $C_T = \{C_{HHFO}[Q_T + (MZ)(Q_{RWHM})] - C_U(MZ)(Q_{RWHM})\} / Q_T$

Fish & Water Only: Mixing Zone / Applicable at point of withdrawal

Carcinogen $C_T = \{C_{HHFW}[Q_T + (Q_{IWHM})] - C_U(Q_{IWHM})\} / Q_T$
 Non-Carcinogen $C_T = \{C_{HHFW}[Q_T + (Q_{IW7Q10})] - C_U(Q_{IW7Q10})\} / Q_T$

Aquatic Life - Whole Effluent Toxicity

Acute (Units TU_a)

NO ZID given $C_T = C_A$
 ZID given $C_T = (C_A - C_U) \times (ZID)$

Chronic Mixing Zone / Complete Mix (Units TU_c)

$C_T = \{C_C[Q_T + (MZ)(Q_{RW7Q10})] - [C_U(MZ)(Q_{RW7Q10})]\} / Q_T$
 Conversion of TU_c to TU_a : $TU_c \times ACR = TU_a$

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Metal Aquatic Criteria

Pollutant

Total Recoverable Cadmium
 Chromium III
 Total Recoverable Copper
 Total Recoverable Lead
 Total Recoverable Nickel
 Total Recoverable Silver
 Total Recoverable Zinc

Acute Criteria

$e^{(1.0166 (\ln \text{Hardness}) - 3.924)}$
 $e^{(0.8190 (\ln \text{Hardness}) + 3.7256)}$
 $e^{(0.9422 (\ln \text{Hardness}) - 1.700)}$
 $e^{(1.273 (\ln \text{Hardness}) - 1.460)}$
 $e^{(0.8460 (\ln \text{Hardness}) + 2.255)}$
 $e^{(1.72 (\ln \text{Hardness}) - 6.59)}$
 $e^{(0.8473 (\ln \text{Hardness}) + 0.884)}$

Chronic Criteria

$e^{(0.7409 (\ln \text{Hardness}) - 4.719)}$
 $e^{(0.8190 (\ln \text{Hardness}) + 0.6848)}$
 $e^{(0.8545 (\ln \text{Hardness}) - 1.702)}$
 $e^{(1.273 (\ln \text{Hardness}) - 4.705)}$
 $e^{(0.8460 (\ln \text{Hardness}) + 0.0584)}$
 $e^{(0.8473 (\ln \text{Hardness}) + 0.884)}$

Hardness (as mg/l CaCO₃)

Zone Initial Dilution (ZID)
 Mixing Zone

$$H_{RW} + [H_T + H_{RW}]/ZID$$

$$[(Q_{RW7Q10})(MZ)(H_{RW}) + (Q_T)(H_T)]/[(Q_{RW7Q10})(MZ) + (Q_T)]$$

Total Ammonia Criteria

Chronic - applies state wide - unionized criteria of 0.05 mg/l
 °C

$$[0.05 * (1 + 10^{(pKa - pH)})]/1.2 \quad pKa = (0.0902 + (2730/(273.1 + T))) \quad T = \text{Temperature}$$

Acute - applies to the Ohio River (ORSANCO Criteria)

$$[0.411 / (1 + 10^{(7.204 - pH)})] + [58.4 / (1 + 10^{(pH - 7.204)})]$$

Bioaccumulative or Persistent

For new facilities after September 8, 2004 mixing zones shall not be granted for bioaccumulative or persistent pollutants of concern.

Mixing zones for bioaccumulative or persistent pollutants of concern assigned prior to September 8, 2004 shall expire no later than September 8, 2014, unless the permittee agrees to expiration of the mixing zone prior to that date.

Therefore, the application of the more stringent criteria of Human Health Fish & Water Consumption, Human Health Fish Only Consumption, and Aquatic Life Chronic shall apply as end-of-pipe effluent limitations.

Antidegradation

If a new facility or an existing facility that will have a pollutant load increase, the effluent limits are halved unless the receiving stream is impaired or the permittee has demonstrated a negative socioeconomic or cost benefit analysis.

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Reasonable Potential Analysis

In establishing water quality based effluent conditions the Division of Water must determine if the pollutant concentrations in the discharge will cause, have the reasonable potential to cause, or contribute to an excursion of any water standard. The process by which the Division of Water makes this determination is known as a Reasonable Potential Analysis.

A Reasonable Potential Analysis is performed by first calculating the expected effluent limitations for those pollutants with water quality criteria. The calculated limits are then compared to the concentrations reported on the KPDES permit application and/or a summarization of the values reported on the Discharge Monitoring Report (DMRs) submitted during the term of the permit. This comparison is made by dividing the reported value by the calculated effluent limitation and converting to a percentage. The following criteria are used in determining how the pollutant will be addressed in the permit.

New Permits or New Pollutants on Permit Renewals

If the reported concentration is less than 70% of the calculated effluent limit then no monitoring or limitations will be required.

If the reported concentration is equal to or greater than 70% but less than 90% of the calculated effluent limit then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is less than 12 then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is equal or greater than 12 then an effluent limitation will be required.

Permit Renewals - Existing Pollutants

If the reported concentration is less than 70% of the calculated effluent limit then and the source of the reported concentration was the DMRs for that facility and there were more than 12 DMRs utilized to determine the reported concentrations then the pollutant will be removed from the permit.

If the reported concentration is equal to or greater than 70% but less than 90% of the calculated effluent limit then monitoring will be required.

If the reported concentration is equal to or greater than 90% then an effluent limitation will be required.

In all cases, the Division of Water still may exercise its Best Professional Judgment in the implementation of the results.

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Parameter	CAS Number	Reported Discharge (mg/l)		Calculated Effluent Limitations (mg/l)		Reasonable Potential		Data Source	No. of Samples	Effluent Requirement		Justification	
		Average	Maximum	Average	Maximum	Average	Maximum			Average	Maximum	Average	Max
Chloride	16887006	155.00000	175.00000	600.000000	1,200.000000	25.83%	14.58%	DMR	38	Remove	Remove	Chronic	Acute
Total Residual Chlorine		0.000000	0.000000	0.011000	0.019000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Color		0.000000	0.000000	1,789.818000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Fluoride		0.000000	0.000000	47,728.480000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Nitrate-Nitrite (as N)	14797558	0.000000	0.000000	238,642.400000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Total Alpha		0.000000	0.000000	NA	15.000000	0.00%	0.00%	No Data	0	None	None	NA	Acute
Total Beta		0.000000	0.000000	NA	50.000000	0.00%	0.00%	No Data	0	None	None	NA	Acute
Total Radium		0.000000	0.000000	NA	5.000000	0.00%	0.00%	No Data	0	None	None	NA	Acute
Sulfate (as SO4)		0.000000	0.000000	5,966,060.000000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Surfactants		0.000000	0.000000	11,932.120000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Total Recoverable Barium	7440393	0.000000	0.000000	23,864.240000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Total Recoverable Iron	7439896	0.000000	0.000000	1.000000	4.000000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Total Recoverable Antimony	7440360	0.000000	0.000000	0.640000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Total Recoverable Arsenic	7440382	0.000000	0.000000	0.150000	0.340000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Total Recoverable Beryllium	7440417	0.000000	0.000000	95.456960	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Total Recoverable Cadmium	7440439	0.000000	0.000000	0.000580	0.006076	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Total Recoverable Chromium	7440439	0.000000	0.000000	2,386.424000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Total Recoverable Copper	7440508	0.008000	0.017000	0.022487	0.036933	35.58%	46.03%	DMR	30	Remove	Remove	Chronic	Acute
Total Recoverable Lead	7439921	0.002000	0.003000	0.011800	0.302804	16.95%	0.99%	DMR	30	Remove	Remove	Chronic	Acute
Total Recoverable Mercury	7439976	0.000000	0.000000	0.000051	0.001700	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
Total Recoverable Nickel	7440020	0.000000	0.002000	0.124640	1.121062	0.00%	0.18%	Application	1	None	None	Chronic	Acute
Total Recoverable Selenium	7782492	0.000000	0.000000	0.005000	0.020000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Total Recoverable Silver	7440224	0.000000	0.000000	NA	0.022239	0.00%	0.00%	No Data	0	None	None	NA	Acute
Total Recoverable Thallium	7440280	0.000000	0.000000	0.006300	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Total Recoverable Zinc	7440666	0.000000	0.021000	0.286677	0.286677	0.00%	7.33%	Application	1	None	None	Chronic	Acute
Free Cyanide	57125	0.000000	0.000000	0.005200	0.022000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
2,3,7,8 Tetrachlorodibenzo P Dioxin	1746016	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Acrolein	107028	0.000000	0.000000	0.290000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Acrylonitrile	107131	0.000000	0.000000	0.000250	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Benzene	71432	0.000000	0.000000	0.051000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Bromoform	75252	0.000000	0.000000	0.140000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Carbon Tetrachloride	56235	0.000000	0.000000	0.001600	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Chlorobenzene	108907	0.000000	0.000000	21.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Chlorodibromomethane	124481	0.000000	0.000000	0.013000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Chloroform	67663	0.000000	0.000000	0.470000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Dichlorobromomethane	75274	0.000000	0.000000	0.017000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2-Dichloroethane	107062	0.000000	0.000000	0.037000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,1-Dichloroethylene	75354	0.000000	0.000000	0.003200	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2-Dichloropropane	78875	0.000000	0.000000	0.015000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,3-Dichloropropene	542756	0.000000	0.000000	1.700000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Ethylbenzene	100414	0.000000	0.000000	29.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Methyl Bromide	74839	0.000000	0.000000	1.500000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Methylene Chloride	75092	0.000000	0.000000	0.590000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,1,2,2-Tetrachloroethane	79345	0.000000	0.000000	0.004000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Parameter	CAS Number	Reported Discharge (mg/l)		Calculated Effluent Limitations (mg/l)		Reasonable Potential		Data Source	No. of Samples	Effluent Requirement		Justification	
		Average	Maximum	Average	Maximum	Average	Maximum			Average	Maximum	Average	Max
Tetrachloroethylene	127184	0.000000	0.000000	0.003300	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Toluene	108883	0.000000	0.000000	200.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2-Trans-Dichloroethylene	156605	0.000000	0.000000	140.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,1,1-Trichloroethane	71556	0.000000	0.000000	4,772.848000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
1,1,2-Trichloroethane	79005	0.000000	0.000000	0.016000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Trichloroethylene	79016	0.000000	0.000000	0.030000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Vinyl Chloride	75014	0.000000	0.000000	0.530000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2-Chlorophenol	95578	0.000000	0.000000	0.150000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4-Dichlorophenol	120832	0.000000	0.000000	0.290000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4-Dimethylphenol	105679	0.000000	0.000000	0.850000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4-Dinitrophenol	51285	0.000000	0.000000	5.300000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Pentachlorophenol	87865	0.000000	0.000000	0.003000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Phenol	108952	0.000000	0.000000	1,700.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4,6-Trichlorophenol	88062	0.000000	0.000000	0.002400	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Acenaphthene	83329	0.000000	0.000000	0.990000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Anthracene	120127	0.000000	0.000000	40.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Benzidine	92875	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Benzo(a)anthracene	56553	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Benzo(a)pyrene	50328	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Benzo(k)fluoranthene	205992	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Bis(2-chloroisopropyl)ether	108601	0.000000	0.000000	65.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Bis(2-ethylhexyl)phthalate	117817	0.000000	0.000000	0.002200	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Butylbenzyl phthalate	85687	0.000000	0.000000	1.900000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2-Chloronaphthalene	91587	0.000000	0.000000	1.600000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Chrysene	218019	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Dibenzo(a,h)anthracene	53703	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2-Dichlorobenzene	95501	0.000000	0.000000	17.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,3-Dichlorobenzene	541731	0.000000	0.000000	0.960000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,4-Dichlorobenzene	106467	0.000000	0.000000	2.600000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
3,3-Dichlorobenzidine	91941	0.000000	0.000000	0.000028	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Diethyl phthalate	84662	0.000000	0.000000	44.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Dimethyl phthalate	131113	0.000000	0.000000	1,100.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Di-n-butyl phthalate	84742	0.000000	0.000000	4.500000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4-Dinitrotoluene	121142	0.000000	0.000000	0.003400	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2-Diphenylhydrazine	122667	0.000000	0.000000	0.000200	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Fluoranthene	206440	0.000000	0.000000	0.140000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Fluorene	86737	0.000000	0.000000	5.300000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Hexachlorobenzene	118741	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Hexachlorobutadiene	87683	0.000000	0.000000	0.018000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Hexachlorocyclopentadiene	77474	0.000000	0.000000	17.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Hexachloroethane	67721	0.000000	0.000000	0.003300	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Ideno(1,2,3-cd)pyrene	193395	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Isophorone	78591	0.000000	0.000000	0.960000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Nitrobenzene	98953	0.000000	0.000000	0.690000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
N-Nitrosodimethylamine	62759	0.000000	0.000000	0.003000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA

STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 001

Parameter	CAS Number	Reported Discharge (mg/l)		Calculated Effluent Limitations (mg/l)		Reasonable Potential		Data Source	No. of Samples	Effluent Requirement		Justification	
		Average	Maximum	Average	Maximum	Average	Maximum			Average	Maximum	Average	Max
N-Nitrosodi-n-Propylamine	621647	0.000000	0.000000	0.000510	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
N-Nitrosodiphenylamine	86306	0.000000	0.000000	0.006000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Pyrene	129000	0.000000	0.000000	4.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
1,2,4-Trichlorobenzene	120821	0.000000	0.000000	0.940000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Aldrin	309002	0.000000	0.000000	0.000000	0.003000	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
alpha-BHC	319846	0.000000	0.000000	0.000005	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Beta-BHC	319857	0.000000	0.000000	0.000017	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
gamma-BHC (Lindane)	58899	0.000000	0.000000	0.000063	0.000950	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
Chlordane	57749	0.000000	0.000000	0.000001	0.002400	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
4,4'-DDT	50293	0.000000	0.000000	0.000000	0.001100	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
4,4'-DDE	72559	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
4,4'-DDD	72548	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Dieldrin	60571	0.000000	0.000000	0.000000	0.000240	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
Alpha-Endosulfan	959988	0.000000	0.000000	0.000056	0.000220	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Beta-Endosulfan	33213659	0.000000	0.000000	0.000056	0.000220	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Endosulfan sulfate	1031078	0.000000	0.000000	0.089000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Endrin	72208	0.000000	0.000000	0.000036	0.000086	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Endrin aldehyde	7421934	0.000000	0.000000	0.000300	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Heptachlor	76448	0.000000	0.000000	0.000000	0.000520	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
Heptachlor epoxide	1024573	0.000000	0.000000	0.000000	0.000520	0.00%	0.00%	No Data	0	None	None	HH Fish	Acute
Polychlorinated Biphenyls (PCBs)		0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Toxaphene	8001352	0.000000	0.000000	0.000000	0.000730	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
1,2,4,5-Tetrachlorobenzene	95943	0.000000	0.000000	0.001100	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2-methyl-4,6-dinitrophenol	534521	0.000000	0.000000	0.280000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
2,4-D	94757	0.000000	0.000000	4,522.070000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
2,4,5-TP (Silvex)	93721	0.000000	0.000000	238.642400	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
2,4,5-trichlorophenol	95954	0.000000	0.000000	3.600000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Asbestos	1332214	0.000000	0.000000	452,207,000.000000	NA	0.00%	0.00%	No Data	0	None	None	HH DWS	NA
Benzo(b)fluoranthene	205992	0.000000	0.000000	0.000018	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Bis(2-chloroethyl)ether	111444	0.000000	0.000000	0.000530	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Bis(chloromethyl)ether	542881	0.000000	0.000000	0.000000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Chloropyrifos	2921882	0.000000	0.000000	0.000041	0.000083	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Chromium (III)	16065831	0.000000	0.000000	0.200275	4.190154	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Chromium (VI)	18540299	0.000000	0.000000	0.011000	0.016000	0.00%	0.00%	No Data	0	None	None	Chronic	Acute
Demeton	8065483	0.000000	0.000000	0.000100	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Dinitrophenols	25550587	0.000000	0.000000	5.300000	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Guthion	86500	0.000000	0.000000	0.000010	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Hexachlorocyclo-hexane-Technical	319868	0.000000	0.000000	0.000041	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
Hydrogen Sulfide, Undissociated	7783064	0.000000	0.000000	0.002000	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Malathion	121755	0.000000	0.000000	0.000100	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Methoxychlor	72435	0.000000	0.000000	0.000030	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Mirex	2385855	0.000000	0.000000	0.000001	NA	0.00%	0.00%	No Data	0	None	None	Chronic	NA
Nitrosamines, Other		0.000000	0.000000	0.001240	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
N-Nitrosodibutylamine	924163	0.000000	0.000000	0.000220	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA
N-Nitrosodiethylamine	55185	0.000000	0.000000	0.001240	NA	0.00%	0.00%	No Data	0	None	None	HH Fish	NA

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